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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,752	01/23/2002	Kazuki Tsuchimoto	020617	9920

38834 7590 02/15/2005

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EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,752

Applicant(s)

TSUCHIMOTO ET AL.

Examiner

John L. Goff

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10, 12-17 and 19-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10, 12-17 and 19-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/3/04 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claims 27-32 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 27-32 require "the polarizer is a non-foamed film". As noted in applicants response filed 12/3/04 on page 8, last line "a hydrophilic polymer can not be formed into a foamed layer". Thus, as claim 1 requires "a dyed hydrophilic polymer film" claims 27-32 do not further limit claim 1.
4. Claims 5, 10, and 20-22 are objected to because of the following informalities: In the claims delete "N/cm" and insert therein - - N/cm² - -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 27-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 27-32 require “the polarizer is a non-foamed film”. The specification does not disclose anything regarding foaming of the polarizer. Furthermore, the specification discloses on page 6, lines 8-10 “A polarizer (A) is not limited especially but various kinds of polarizer may be used.”. Thus, there does not appear to be any support to positively exclude foamed polarizers. It is suggested claims 27-32 be deleted to overcome this rejection and the objection above.

Claim Rejections - 35 USC § 103

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1733

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. (U.S. Patent 4,387,133) in view of Raabe et al. (U.S. Patent 4,370,374).

Ichikawa et al. disclose a method of manufacturing a polarizer comprising laminating a polarizing film to a protective film with or without adhesive. Ichikawa et al. teach the method of manufacturing without using adhesive comprises providing a polarizing film, providing a protective film, and thermocompression bonding the films to form a polarizer (Column 1, lines 20-23 and Column 7, lines 23-30 and Example 3). Ichikawa et al. teach the polarizing film may comprise a dyed hydrophilic polymer film, e.g. polyvinyl alcohol-iodine system (Column 2, lines 40-45). Ichikawa et al. are silent as to using as the protective film one which is formed of two layers having different softening points, it being noted Ichikawa et al. are not limited to using any particular, e.g. single layer, protective film. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the protective film taught by Ichikawa et al. a protective film of the type taught by Raabe et al. which comprises at least two layers having different softening points to form an excellent durable bond without blisters between the polarizing film and the protective film.

Raabe et al. disclose a multilayer plastic film useful as a protective film for plastic films including those used as polarizing films, e.g. foamed plastic bodies, wherein the multilayer film forms an excellent bond directly with the plastic films (i.e. the bond does not require the use of adhesives) that is free of blisters. Raabe et al. teach the multilayer film comprises at least two layers having different softening points wherein the low softening point layer has a softening

Art Unit: 1733

point not less than 90 °C and the difference between softening points of the layers is not less than 10 °C (Column 1, lines 44-66 and Column 2, lines 47-50 and Column 4, lines 27-61 and Claim 5).

9. Claims 1, 2-6, 10, 12-15, and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. and Raabe et al. as applied to claim 16 above, and further in view of either one of Land (U.S. Patent 2,237,567) or Crandon (U.S. Patent 3,051,054), and optionally Kahn et al. (U.S. Patent 3,772,128).

Ichikawa et al. and Raabe et al. as described above teach all of the limitations in claims 1, 2, 6, 12-15, 23, 27, 28, and 32 except for a specific teaching that the dyed hydrophilic polymer film, i.e. polarizing film, is stretched. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the dyed hydrophilic polymer film taught by Ichikawa et al. as modified by Raabe et al. one that was stretched as this was a well known and conventional technique in the art as shown for example by either one of Land or Crandon for improving the efficiency of the polarizer.

Land discloses a process for manufacturing a polarizer comprising a dyed hydrophilic polymer polarizing film, e.g. polyvinyl alcohol-iodine, that is stretched wherein stretching the polarizing film is performed to increase its efficiency (Column 1, lines 57-60 and Column 2, lines 1-5, 18-24). Crandon discloses a process for manufacturing a polarizer comprising a stretched, dyed hydrophilic polymer polarizing film, e.g. polyvinyl alcohol-iodine, wherein the steps of stretching the film to orient its molecules and dyeing the film to render it light polarizing are well known and conventional steps in the art (Column 2, lines 14-19 and 28-32).

Regarding claims 2, 6, and 23-26, Ichikawa et al. teach pre-heating the protective film to a tacky state and thermocompression bonding, i.e. simultaneously applying heat and pressure, the tacky protective film and polarizing film such that the limitations are met (Column 7, lines 23-30 and Example 3).

Regarding claims 3-5, 10, and 19-22, Ichikawa et al. as modified by Raabe et al. and either one of Land or Crandon do not specifically require any specific laminating conditions, e.g. temperature, pressure, and time. However, it is noted Ichikawa et al. suggest for a tacky film thermocompression conditions of 80 °C for 3 seconds at a pressure of 29 N/cm² (Example 3), and Raabe et al. while not limited to any particular protective material suggest a softening point of 90 to 110 °C for the lower softening point material (Claim 5). Furthermore, Ichikawa et al. suggest forming the protective material from for example vinyl polymer a polymer conventionally used as a protective film for a polarizing film wherein the vinyl polymer protective film is thermocompression bonded to the polarizing film in a conventional process at a temperature not less than 90 °C by passing through heated nip rolls, e.g. providing the benefit of high speed continuous lamination, as shown by the optional reference to Kahn et al. (Figure 1 and Column 1, lines 65-68 and Column 2, lines 10-19 and 47-53 and Column 3, lines 9-15 and 23-29). Thus, in view of the above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the laminating conditions as a function of the particular type of protective and polarizing materials used, the thickness of the protective and polarizing materials used, etc. as doing so would have required nothing more than ordinary skill and routine experimentation.

Art Unit: 1733

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al., Raabe et al., either one of Land or Crandon, and optionally Kahn et al. as applied above in paragraph 9, and further in view of Hamada et al. (U.S. Patent 4,230,768).

Ichikawa et al., Raabe et al., either one of Land or Crandon, and optionally Kahn et al. as applied above teach all of the limitations in claim 17 except for a specific teaching of the particular thickness for the polarizing film. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the thickness of the polarizing film taught by Ichikawa et al. as modified by Raabe et al., either one of Land or Crandon, and optionally Kahn et al. any well known and conventional thickness such as 5 to 50 microns as it was well known to form polarizers from polarizing films having this thickness as shown for example by Hamada et al. wherein only the expected results would be achieved.

Hamada et al. disclose a method of manufacturing a polarizer comprising laminating a polarizing film to a protective film with or without adhesive. Hamada et al. teach the method of manufacturing without using adhesive comprises providing a polarizing film (e.g. having a conventional thickness of 5 to 50 microns), providing a protective film, and contacting the films such that they are thermocompression bonded, i.e. bonded by the application of heat and pressure (e.g. at least contacting pressure) (Column 4, lines 1-12 and Column 6, lines 13-17 and 41, 44, and 45).

Response to Arguments

11. Applicant's arguments with respect to claims 1-6, 10, 11-17, and 19-32 have been considered but are moot in view of the new ground(s) of rejection. Applicants argue, "there

Art Unit: 1733

would have been no motivation to use the protective film of Raabe on a polarizer comprising a stretched polymer film made of dyed hydrophilic polymer film, because Raabe does not provide any teaching or motivation to transfer its method to the field of optical field, and because the teaching of Raabe is limited to foamed films, so that there is no suggestion or motivation to adapt its method to stretched polymer films.” Raabe et al. teach the protective multilayer film may be used to encapsulate polymer film including foamed film without forming blisters therebetween. Raabe et al. clearly teach any type of film including those other than foamed film may be encapsulated (Column 4, lines 56-61), and as foamed film is suggested by Raabe et al. the protective multilayer film taught by Raabe et al. is clearly useful in the optical field as foamed films are well known as polarizing films (See Wong et al. (U.S. Patent 3,322,601) and Kahn et al. (U.S. Patent 3,772,128) previously cited of record). Applicants further argue, “In addition, with respect to dependent claims 3, 5, 20-22, and the claims dependent thereon, as also indicated in the Amendment filed on October 4, 2004, it is submitted that Raabe teaches applying an iron for 10 seconds, so that Raabe fails to teach or suggest a heating treatment period of time is not more than five seconds, as recited in present claim 3, and also fails to teach or suggest applying a linear loads pressure at not less than 5 N/cm, as recited in present claim 5.”. See the above rejection of claims 3, 5, and 20-22.

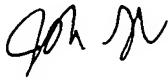
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is (571) 272-1216. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).


Art Unit: 1733

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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